

New Era Economics
DISCUSSION PAPER

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and David Nash

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ALL CHANGE

WILL THERE BE A REVOLUTION IN
ECONOMIC THINKING IN THE
NEXT FEW YEARS?



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INTRODUCTION

On 15 September 2008, Lehman Brothers – then the fourth-largest investment bank on Wall Street – filed for Chapter 11 bankruptcy protection. This was a watershed moment in the 2008/09 financial collapse. Before Lehman's went under, financial markets were in turmoil and a number of advanced economies were already in recession but it was possible to imagine that policymakers might find a way to avoid a substantial downturn. After the bankruptcy, a severe recession became inevitable.

A year later, despite the efforts of the G20 to coordinate a policy response to the worsening crisis, the world economy was in the depths of its worst recession since the 1930s. This prompted many economic commentators to suggest that a major upheaval in economic thinking was imminent. Typical was Fredric Mishkin, a former Federal Reserve governor, who said in the *Wall Street Journal* on 4 November 2009: 'We could be looking at a paradigm shift'¹. And yet, three years after Lehman's bankruptcy, there is little evidence the paradigm has shifted. After flirting with Keynesian-style fiscal reflation during the recession, governments in advanced economies are now cutting spending and increasing taxes in order to reduce their budget deficits. Apart from a limited tightening of the regulations under which banks operate, nothing much has changed.

In this paper, we seek to understand why, despite the economic dislocations of the last four years, there has been no revolution in economic thinking, and to ask whether change could still occur in the next few years. We do so by first setting out a framework for paradigm change based on the writings of Thomas Kuhn, Imre Lakatos and Peter Hall. We use this framework to take a necessarily brief look at the two major paradigm shifts in macroeconomic thinking in the 20th century: from neoclassical economics to Keynesianism and then from Keynesianism to monetarism/neoliberalism. We then analyse developments over the last three years in an attempt to understand why there has not been a comparable paradigm shift and to gauge whether such a shift is likely over the next decade.

¹ See <http://online.wsj.com/article/SB125720159912223873.html>

1. PARADIGMS AND THE CONCEPT OF A 'PARADIGM SHIFT'

The *Oxford English Dictionary* defines a paradigm as 'a mode of viewing the world which underlies the theories and methodology of science in a particular period of history'. A paradigm is, therefore, a very broad concept. It is not just the current dominant theory but the whole structure of axioms, assumptions and interpretations that underlie it and that condition and determine the solutions and instrumentation used by its practitioners, as well as the fabric of its institutions.

The American philosopher and historian, Thomas Kuhn, was one of the first thinkers to set out a comprehensive theory of paradigms in scientific thought and coined the term 'paradigm shift' in his seminal book *The Structure of Scientific Revolutions* (1962, 1972). Kuhn argued that small anomalies could exist within a paradigm or any given scientific world view and not inhibit the application and development of what he termed 'normal science': namely, the solving of scientific problems under 'business as usual'. Small anomalies could be ignored or dismissed as irrelevant, since 'the scientist who pauses to examine every anomaly he notes will seldom get any significant work done' (ibid. 82). However, a paradigm shift would begin to occur when there were sufficiently numerous and significantly overwhelming anomalies to throw the existing paradigm into question and create a crisis within the relevant scientific discipline.

This would necessarily coincide with a period when new ideas emerge and are tested to see how they perform relative to the old paradigm in explaining both the emergent anomalies and the parts of the old paradigm that appear still to hold true. Eventually, a new paradigm, fundamentally different to the pre-existing one, would form and after a 'battle' of ideas between supporters of the old and new paradigms, the new mode of viewing the world would emerge triumphant and dominate thinking.

The prerequisite for paradigm change, therefore, is an unacceptable breakdown of the existing paradigm and the existence of new ideas that can come together to form a new paradigm that is clearly superior to the old one. For Kuhn, the existence of an alternative world view was absolutely critical since 'a paradigm is declared invalid only if an alternate candidate is available to take its place' (ibid: 77): indeed, in the absence of a viable alternative, the dominant paradigm is more likely to survive recurrent and even severe anomalies and its proponents will be able to simply reject claims that it is moribund. It is also worth noting Kuhn's insistence that any new paradigm would always be better than the old one, a stance which put him at odds with proponents of relativist theory.

Kuhn's theory was challenged by Karl Popper, who rejected the notion of sudden dramatic shifts in the established scientific view in favour of a world in which scientists gradually adapt their theories to fit with new information. This led Imre Lakatos to develop an explanation of progress that tried to reconcile Kuhn and Popper and also fit with the historical progress of scientific research. Lakatos focused on 'research programmes', which he defined as a collection of theories and techniques that share some common idea. He distinguished between 'progressive' research programmes, which are growing, discovering new facts and methodologies, better explaining the data and making more accurate predictions, and 'degenerating' programmes, for which the opposite is true. But he also emphasised the staying power of a degenerating programme, which would be protected by the scientists with a vested interest in it, despite its lack of progress. For Lakatos, therefore, science changes in the gradual manner described by Popper, while the periods Kuhn describes as paradigm shifts are those in which a progressive research programme has developed such a critical mass of support that it is able to supersede a degenerating programme. His emphasis, therefore, is very much on developments within the scientific community.

2. PARADIGM SHIFTS IN THE SOCIAL SCIENCES

Kuhn and Lakatos wrote about paradigm and research programme change in the context of physics, chemistry and the natural sciences, and the degree to which their insights can be applied to the social sciences, and to economics in particular, has been the subject of some debate. Kuhn's ideas suggest a fairly rapid (albeit not instantaneous) and neat transition from one paradigm to another, with the old being largely abandoned in favour of the new. This seems more suited to the scientific world where theories can be proved (or disproved) in the laboratory through experimentation. In economics no such certainty is available. Lakatos focuses on a scientific community which is left alone to analyse the physical world. Generally, the economics community does not experience such isolation.

Change in the social sciences is seen as a much slower and incremental process that has sociological and epistemological elements. It is often described as 'social learning' under which policymakers try out new ideas to see if they work; what Peter Hall describes as 'a deliberate attempt to adjust the goals or techniques of policy in response to past experience and new information' (1993: 278).

This leads Hall to distinguish three 'orders' of change in economic policymaking: changes in the level or setting of policy instruments (such as an increase in interest rates or a tax cut); changes in the instruments being used (such as the use of quantitative easing in recent years); and changes in the goals of policy (such as the switch from targeting full employment to inflation control in the 1980s). He identifies this third type of change as effectively amounting to a paradigm shift (the first two are often incremental and sit within the existing paradigm and do not necessarily lead to more radical, third order change), but only if it is accompanied by the introduction of a new 'framework of ideas and standards that specifies not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems that they are meant to be addressing' (ibid: 279).

Charles Fischer cites Kuhn himself as believing that 'a social science setting is not as conducive to the cause-effect relationships between anomaly, crisis, and scientific revolution as is a natural science environment' (1993: 55)¹. Generally, economists, particularly macroeconomists can only observe developments in the real world (though a strand of experimental economics has developed over the last few decades) and the outcomes are rarely definitive enough to overwhelmingly back one theory over another. There is also the problem of the absence of a counterfactual – what would have happened if a different policy had been pursued? This makes it easier for those with a vested interest in maintaining the old paradigm, and its problems and solutions, to defend it; and harder for those trying to encourage change.

¹ In *The Structure of Scientific Revolutions* Kuhn expressed doubts about whether instances of paradigm shift have occurred in the social sciences or, for that matter, whether one can talk about paradigms in the same way in that discipline.

AW Coats summarised part of this thinking in 1969:

... the structure of scientific revolutions is much less readily discernible in economics than in the natural sciences. Economic theories (whether paradigms or sub-paradigms) are usually less rigid and compelling than their natural science equivalents, hence they rarely represent an obvious challenge to the established ... tradition. Instead of outright hostility they more often encounter neglect, scepticism, or even anti-intellectual scorn. (293)

Reflecting the uncertainties that exist in judging alternative economic models Michael Oliver and Hugh Pemberton have developed a model of change that allows for the failure of new ideas to coalesce into a new paradigm, resulting in the reassertion of the dominance of the old model (2004). This may help explain why there has not been a paradigm change in the last three years. A new paradigm is only in place when it has been adopted wholesale by economic policymakers.

This does not mean there are few attempts to challenge the dominant paradigm in the social sciences; quite the opposite in fact. Economics and politics are far more contested spaces than science and so there are usually 'a number of competing and incommensurable solutions to... problems' (Kuhn 1962, 1972: 165). Here, Kuhn does have a useful description, what he calls the 'pre-paradigmatic period' (that is, before a new view of the world is established) when competition rages between different schools vying for pre-eminence and when there is no clear frame of reference for even agreeing what facts are most relevant (ibid: 178).

However, what Hall and others have emphasised in their writings is that paradigm changes in social sciences are more likely to occur gradually over time, rather than abruptly.² In a classification that distinguishes between gradual and abrupt change, and between change within the existing model and the introduction of a new model, Christopher Pollitt and Geert Bouckaert suggest that paradigm change in the social sciences is more likely to develop slowly like a stalactite than to occur suddenly like an earthquake (reproduced in Hill 2010). And while earthquakes are immediately observable, detecting the growth of a stalactite can only be done over a period of time.

This does not rule out a role for major exogenous shocks (such as the quadrupling of oil prices in 1973) but does deny they are the sole drivers of change. Underlying endogenous events, which take place intermittently and over a protracted period of time, are often equally, if not more, important. According to Wolfgang Streeck and Kathleen Thelen, much of the existing literature of change that sits within the historical institutionalist school relies, incorrectly 'on a strong punctuated equilibrium model that draws an overly sharp distinction between long periods of institutional stasis periodically interrupted by some sort of exogenous shock that opens things up, allowing for more or less radical organisation' (2005: 1). In fact, the process of change is often more complex and nuanced than this: the authors identify five different variants of gradual institutional change alone, ranging from 'displacement' and 'exhaustion' which both suggest an outcome akin to a fundamental overhaul of the paradigm in keeping with Kuhnian thought, to 'drift', 'layering' and 'convergence', which each suggest elements of the past paradigm remaining in existence.

² Kuhn argued that the transition from a paradigm in crisis to a new one is not a cumulative process, but amounts to the 'reconstruction of the field from new fundamentals' (1970: 85).

Pat Welch and Wilfred Dolfsma take the stalactite analogy one step further. They argue that paradigm shifts in economics will ‘not [be] like bolts from the blue’ (2004: 2). In fact, they will not be ‘shifts’ at all. Rather, the new paradigm will grow out of the old one, keeping bits that still seem relevant and replacing those that do not with new ones. For them, the prevalent economic paradigm is evolving all the time: sometimes slowly; sometimes more rapidly. A ‘paradigm shift’ is an illusion caused by a particularly rapid period of change.

Despite these criticisms, Hall’s definition of what constitutes a paradigm in the world of economics – a definition that is entirely consistent with the *Oxford English Dictionary* – remains useful. It takes us away from the Kuhnian notion of how paradigms change (that is, a clean break with tradition) into a rather different world. In economics, the absence of certainty about outcomes means that paradigm change will be based, in part, on evidence suggesting the old paradigm has collapsed, but also on a judgment that the new paradigm would have done better at tackling (or even preventing) the anomalies that have occurred, and will continue to do so in the future. For this reason, there is likely to be a good deal of trial and error before the new paradigm emerges.

Additionally, in a democratic political set-up, paradigm change is likely to be associated with a shift of power, possibly within the ruling party, but more likely through a change in the party in charge. Most of the time the ‘old guard’ will be too closely associated with the old paradigm to credibly put forward the new one, although ‘conversion’ is not impossible (Coats 1969).

Actors and institutions have a critical role both as drivers and advocates of a change in the dominant paradigm. As Hall notes, the movement from one paradigm to another depends ‘not only on the arguments of competing factions, but on their positional advantages ... on the ancillary resources they can command ... and on exogenous factors affecting the power of one set of actors to impose its paradigm over others’ (Hall 1993: 280). This relationship can have a reciprocal effect. Those in a position of authority – politicians and technical experts – can help support the development of a new paradigm. At the same time, as awareness of the new paradigm increases, its supporters can benefit by appearing more up-to-date in their thinking than their political rivals, who might be accused of clinging to old and ineffective ideas and policies.

3. HISTORICAL PARADIGM SHIFTS IN ECONOMICS

On Hall's definition, there have been only two paradigm shifts – or 'third-order changes' – in macroeconomics over the last 100 years ³.

The first occurred in the 1940s, when western governments began to implement policies based on the writings of John Maynard Keynes. Although his most ardent supporters would argue that no government fully put Keynes's ideas into practice, the new paradigm is widely referred to as 'Keynesianism'. It was distinguished from neoclassical economics by its focus on the macroeconomy, rather than the microeconomy: 'Keynes more or less invented macroeconomics' (Solow 2005: 93), but he did so primarily by providing a foundation on which other economists built. They were able to do so, Robert Solow argues, because they now had a new theory and, just as importantly, the data required to develop a model of the way the economy works. At the heart of Keynesianism is the belief that changes in aggregate demand have their greatest effect in the short-run, which is all that matters, on output and employment rather than on the price level, and that markets respond only slowly to shocks. As a result, the economy may reach a high-unemployment 'equilibrium'. Consequently, fiscal and/or monetary policy should be used to stabilise the economy and reduce the amplitude of the business cycle.

The second paradigm shift occurred in the 1970s and 1980s. Initially, this involved the replacement of Keynesian ideas about the management of the economy with those of the monetarist school, led by Milton Friedman. Macroeconomic policy, it was argued, should focus on keeping inflation low, through control of the money supply, rather than on targeting full employment through shifts in fiscal policy and interest rates. However, over time the new paradigm broadened out to incorporate the rational expectations hypothesis, as developed by Robert Lucas and others, and the notion that state involvement in the economy should be kept to a minimum. The removal of Keynesianism from the pre-eminence it had previously enjoyed in academia and policymaking circles, and return to a classical, *laissez faire* approach to the economy, led to the new paradigm being dubbed 'neoliberalism'. It was associated with policies, such as free international trade and capital flows, privatisation and minimal regulation of the financial industry ⁴ but was only loosely connected to theoretical developments in economic thinking.

3 There have also been changes in microeconomics. In the 1940s, there was a shift from partial equilibrium theory to general equilibrium theory and in the 1980s and 1990s to game theory, experimental and behavioural economics. The result is that mainstream microeconomics is now less neoclassical. For want of space, these changes are not discussed in this paper.

4 Some have implied that it also substituted higher household debt and asset price inflation for real wage growth as the main source of increasing demand in the economy (see, for example, Palley 2010). This seems too deterministic: why develop a model centred on trends that are unsustainable? It is better, in our view, to see these as unintended consequences of neoliberalism, rather than essential elements of the model.

4. FROM NEOCLASSICAL ECONOMICS TO KEYNESIANISM

The Great Depression represented a major anomaly that neoclassical economics could not explain. All markets, including the labour market, were supposed to be in equilibrium, or return to it quickly. Mass unemployment should not have persisted, but should have led to falls in real wages, until the supply and demand for labour matched each other. That this so obviously did not happen provided the stimulus for a major shift in intellectual thinking that led to the publication of Keynes's *General Theory* and the development of what became known as Keynesian economics. It did not, however, lead immediately to a change in economic policy. Keynesian ideas remained outside the mainstream in the 1930s when the governments in the UK and, despite the New Deal, in the US regarded balancing the budget as necessary for a restoration of business confidence and economic recovery. Only in the totalitarian states of Germany and Russia was public spending used successfully to reduce unemployment before the outbreak of the second world war.

In the UK, the second world war was instrumental in creating the change of thinking within policy circles necessary for the Keynesian paradigm to eclipse the neoclassical model. Social reformers spent the 1930s building up a store of evidence on the scale of deprivation caused by the Depression and the persistently high levels of unemployment in the 1930s. They also highlighted the need for greater state intervention, in contrast to the government's classical approach centred on balanced budgets and *laissez faire*. The war years demonstrated to the ruling elite the practicability of state action and the possibility of ending mass unemployment. As a result, the elite drew up plans for the creation of the post-war welfare state and the government published the 1944 *White Paper on Employment Policy*, which committed the government to maintaining a high and stable level of employment (without which the welfare state would have been unaffordable). However, Paul Addison notes that, even then, there was disagreement between senior Labour and Conservative figures over the ability of government to deliver full employment (1994: 289).

Although all parties in the 1945 general election were committed to social reform, the outcome would have been significantly different if Labour had not won a handsome majority. Even then, the Atlee government did not implement Keynesian demand management policies until late 1947 – over two years after it came to power. Hugh Dalton's budgets from autumn 1945 to spring 1947 aimed broadly for a balanced budget. It was only after a financial crisis and Sir Stafford Cripps became Chancellor in 1947 that policy changed (Addison 1994, Morgan 1984).

The Keynesian revolution in macroeconomic policy was accompanied by a change in the way economics was studied. Academic economics started to 'emphasise... only those parts of Keynesianism that could be modelled' (Hodgson 2009: 1211). The post-war generation of younger economists saw mathematical models as the means of demonstrating that their analyses and policy solutions were the correct ones. In the following years, as the availability of first more data and then more computing power increased, models and mathematics became more dominant in economics, particularly in academic economics. Ironically, as a result, one of Keynes's central themes – uncertainty – disappeared from mainstream economics. This trend was not interrupted by the replacement of Keynesianism by neoliberalism; indeed the dominance of mathematical models became almost complete in the 1980s and 1990s.

The introduction of Keynesian policies at a national level was accompanied by a paradigm shift in global economic policies. Anxious to avoid a repeat of the currency and trade wars of the 1930s, western governments established the Bretton Woods institutions in 1944 and set up a fixed exchange rate regime, with the US dollar pegged to gold at \$35 an ounce, and other currencies pegged to the US dollar. In doing so, they completed a transition from sterling to the dollar as the world's major reserve currency – something that was probable before the war, but inevitable after it. Such radical changes in the world economic order were possible because there was a large degree of agreement on the major problem – avoiding a repeat of the mass unemployment of the 1930s – and the solutions. The only significant disagreement was a dispute between the Americans and Keynes over whether both surplus and deficit countries or just deficit countries should change policies when trade imbalances arose (won by the Americans who argued that deficit countries should bear the burden).

Judged relative to the theoretical models of Kuhn and Hall, this paradigm change took an awfully long time to occur. The necessary pre-condition of serious anomalies in the old model were clearly present in the early 1930s, but the new paradigm took many years to come together and even longer to be implemented in actual policies. The major shock of the second world war and the change of government in the UK immediately after it were needed to bring about change. When it did come, it was led by an elite within government, including figures such as Keynes himself and Beveridge. To a large extent, therefore, this change was a gradual process and followed Hall's social learning model.

5. FROM KEYNESIANISM TO NEOLIBERALISM

The replacement of Keynesianism by neoliberalism can be said to have been a long time coming. Friedrich Hayek published his classic defence of *laissez faire* liberalism – *The Road to Serfdom* – in 1944, before governments had even started fully to implement Keynesian policies. Milton Friedman was making the case for floating exchange rates in 1950, only six years after the Bretton Woods settlement.

However, it took a sharp deterioration in the economic performance of western economies in the late 1960s and early 1970s for the Keynesian paradigm to come under real threat. The emergence of ‘stagflation’ – high inflation and recession at the same time – threatened the old paradigm not only because it represented an appalling economic outcome, but also because it appeared to be impossible in the Keynesian model. By the 1960s, policymakers were placing enormous weight on the Phillips Curve – the apparent trade-off between unemployment and inflation – to guide the demand management of the economy. If inflation was high, then unemployment would be low and so policy should be tightened; if inflation was low, then unemployment would be high and demand could be stimulated by an easing of policy.

But in the early 1970s unemployment and inflation both increased and demand management became more complicated. Then in 1973 oil prices quadrupled, causing inflation to soar – to well over 20 per cent in the UK – and precipitating a recession that saw unemployment increase to post-war highs. Years later, supporters of Keynesian economics were able to explain how a ‘supply shock’ such as a massive increase in the oil price could be fitted into the Keynesian framework. But at the time, stagflation was seen as so big an anomaly that the Keynesian paradigm went into crisis.

Peter Hall’s is the definitive study of this period in the context of the literature on paradigm change (1993), although his focus is on the switch from Keynesianism to monetarism in the 1970s and early 1980s, rather than the broader neoliberalism that emerged in the 1990s. He emphasises the fundamental differences between Keynesians and monetarists over their interpretation of the workings of the economy and the appropriate policy responses to show that, when economic performance deteriorated in a way that the Keynesian paradigm apparently could not explain, there was a coherent, easy to understand and well developed alternative waiting in the wings. However, he does not think that change was the result of social learning. Rather than experts edging their way to a solution, for Hall the most important drivers of change were politicians, such as Margaret Thatcher and Ronald Reagan, who gave the neoliberal agenda political credibility (and vice versa), followed by the media, financial market commentators and thinktanks, with academia having only a minor role. Policy advisers (that is, civil servants) were, for the most part, not involved in driving the new paradigm.

Alan Blinder sees a much bigger role for academics (though his work focuses on the US context). He argues that the rejection of the Keynesian paradigm by what he calls ‘new classical economics’ did not fit into a Kuhnian framework (1988) and, in particular, that economic developments in the 1970s did not represent an anomaly or set of anomalies that could not be explained by the Keynesian model. For Blinder new classical economics could not explain developments in the 1970s and had also failed to explain developments in the 1980s. Instead, he argued that new classicism had triumphed in (US) academia as a result of ‘theorizing over empiricism, of intellectual aesthetics over observation and, in some measure, of conservative ideology over liberalism’ (ibid: 278). In essence, young economists were attracted to the new classicism, where they ignored the evidence of developments in the real economy as they sought to make macroeconomics more like

microeconomics. Their new techniques and ever sophisticated models (the use of which had begun in earnest by Keynesian economists – see above) now sat very neatly with general equilibrium theory, which in turn suggested governments should not interfere in markets, so techniques and ideology matched each other well.

In fact, there was no certainty in the 1970s that if Keynesianism was to be displaced as the dominant paradigm in economics it would be replaced by monetarism/neoliberalism. There were many alternative theories around at the time. Robert Kuttner, for example, lists ‘Chicago monetarists, Post-Keynesians, Neo-Marxists, Neo-Institutionalists, Neo-Austrians, and ... the rational expectations school’ (1987). All competed in the marketplace of ideas during the 1970s and early 1980s until certain strands came together to form neoliberalism.

While this competition was taking place, policymakers were attempting, largely unsuccessfully, to tackle the multiple problems facing their economies with a mixture of Keynesian and other policies. In the UK, incomes policies, cash (rather than volume) limits for public spending and monetary targets were all deployed in an effort to control inflation. Prime Minister James Callaghan’s famously told the Labour party conference in September 1976 that:

We used to think that you could spend your way out of a recession and increase employment by cutting taxes and boosting government spending. I tell you in all candour that that option no longer exists, and in so far as it ever did exist, it only worked on each occasion since the war by injecting a bigger dose of inflation into the economy, followed by a higher level of unemployment as the next step.

However, the abandonment of Keynesian policies at the time was not as great as suggested by this statement – rather they were augmented with other policies. But Callaghan’s statement did represent a view from the top that the anomalies in the Keynesian view of the world had reached a critical point and that the authorities were on the lookout for a new paradigm.

This helped fuel the debate outside government about alternatives; a debate taken up with gusto by the Institute for Economic Affairs and the Centre for Policy Studies, two right-of-centre thinktanks, and by prominent financial journalists including Samuel Brittan and Peter Jay (who wrote the part of Callaghan’s speech quoted above) and followed closely by Margaret Thatcher and other senior figures in the Conservative Party (Pemberton 2010). By 1979, when Thatcher became prime minister, this new thinking had developed sufficiently to enable her government to shift the focus of macroeconomic policy from full employment to low inflation and to follow a wholly monetarist approach to tackling high inflation. Meanwhile, the election of Ronald Reagan as US president ushered in a similar revolution in policy (though given Reagan’s willingness to boost defence spending and run huge fiscal deficits, perhaps the actions of Paul Volcker at the Federal Reserve were more significant initially). Over the following years, the paradigm was rounded out to encompass the full neoliberal panoply of lower income tax rates, privatisation, free markets and deregulation.

As with the Keynesian revolution, the pre-condition for paradigm change of serious apparent anomalies in the existing paradigm were evident in the monetarist/neoliberal revolution. This revolution, however, took place over a much shorter time and was fairly continuous. It was not an earthquake, but if it was a stalactite, it was a fast-growing one. This time the elite were less involved in the change, which was driven largely by other groups within society. The oil shock played an important role in dealing the final death-blow to Keynesianism, but political change was needed in the UK and US before the new paradigm was whole-heartedly adopted in policymaking.

6. WHY HAS THERE BEEN NO PARADIGM CHANGE IN THE LAST THREE YEARS?

In 2008 and 2009 the world economy experienced its worst ever financial crisis, and the deepest recession since the 1930s. Global GDP contracted by 0.5 per cent in 2009 – the first annual fall in GDP in the post-war period (IMF 2011). Real GDP in the advanced countries fell by 3.4 per cent. On the face of it, this would appear to be a bad enough outcome to trigger a paradigm change – so why has one not occurred?

Although economic developments have been bad, perhaps they have not been bad enough. Unemployment in most western economies rose sharply as a result of the recession that followed the financial crisis. In the US, it reached 10 per cent and has since fallen to 8.8 per cent, and in the UK it climbed to 8 per cent and is now 7.7 per cent ⁵. These are high figures in the context of recent experience, but they pale into insignificance compared to the Great Depression. Unemployment was in excess of 20 per cent in Britain in 1931–1933; in the US in 1932–1934 and in Germany in 1930–1933 (Stevenson and Cook 1979). In parts of Britain, more than half the workforce was unemployed, and with a welfare safety net that was far less supportive than that of today.

Similarly, in the 1970s, the combination of high inflation and high unemployment – as well as being counter to received Keynesian economic wisdom – had a greater impact across the population than did recent events. Although unemployment in the UK was lower than now (it peaked at 6 per cent) it was significantly higher than in the previous two decades. This helped to create an aura of crisis. However, inflation, which reached 27 per cent in 1975, was more responsible for a general sense that the economic management of the economy had failed. Unemployment was a problem for those who could not find a job, and for their families. High – and unpredictable – inflation was something that everyone had to deal with. Today's inflation rate of 5 per cent is eroding living standards, because wages are increasing at half that rate, but is hardly on the same scale.

Meanwhile, the economics profession continues to resist change because it has invested so much intellectual capital in the wrong models and is reluctant to admit its mistake. James Galbraith describes 'a kind of Politburo for correct economic thinking' that has been 'on the wrong side of every important policy issue' (2009: 95). This 'Politburo' resists new ideas. Consequently, new economic thinking, or anything that challenges the consensus, is marginalised. Those outside the current mainstream, he argues, cannot get a place at a top US university, cannot get published in top academic journals and are reduced to publishing their ideas in newsletters and blogs. While Galbraith is presumably exaggerating to make a point – there are many US economists, mainly neo-Keynesians like Stiglitz, Krugman and De Long, who are challenging the consensus – and he is largely concerned with US academic circles, his criticism has some relevance. US academics have a powerful influence on thinking in other countries and in the profession outside academia. Economists in the White House, the International Monetary Fund and the World Bank, and those working on Wall Street (and their counterparts in other countries) mix and share ideas with academics. Many economists move back and forth between academia and the 'real world'. Therefore, if a Politburo exists, it is likely to be a major handicap to paradigm change.

⁵ All figures are harmonised unemployment rates from the OECD's *Monthly Economic Indicators*.

Perhaps there are not enough new ideas waiting in the wings to coalesce into a new paradigm. Keynes said in the *General Theory* that it takes a theory to kill a theory and Kuhn argued that a paradigm cannot be displaced by anomalies, only by another paradigm. Unlike in the 1970s, when there were a number of alternative schools of economic thought, each with a significant level of support in academic circles, competing with each other to replace Keynesianism, there appear to be fewer new ideas around today. Rather, most economists appear content to ignore the obvious failings in their economic models: their unrealistic assumptions and complete failure to explain events in the real world. As a result, the new economic thinking that has emerged in recent years is struggling to gain a substantial foothold in the profession.

This view is challenged by Cyril Hédoïn who asserts that there is a 'growing gap between ... the effective practices in economists [and] the content taught in universities' (2010: 4). He highlights behavioural economics, institutional economics, evolutionary game theory and complexity economics as areas that are changing mainstream economic thinking. He does not believe in sudden paradigm shifts and accepts that change within economics is likely to be a long, drawn-out process. However, Hédoïn is focused on what is happening in academic circles. In the world of government, business, the media and thinktanks, most of the new economic thinking that he cites has made little inroads. True, behavioural finance has some adherents in financial circles and the UK government has established a 'Nudge Unit' in the Cabinet Office. But economic thinking in the civil service, the Bank of England and the City is based firmly on long-established economic models and modes of thinking.

7. THE PROSPECTS FOR PARADIGM CHANGE

At the current juncture, it is possible to imagine one of three different types of paradigm change occurring in economics during the next decade: a shift in the macroeconomic paradigm, a shift in the overall objectives of economic policy or a shift in the nature of economic thinking.

A shift in the ‘macroeconomic paradigm’

The global economy has just experienced its deepest recession since the 1930s. This might be taken as indicating a massive failure in the macroeconomic management of the economy. A new paradigm could emerge that articulates a new approach. Stubbornly high unemployment might mean this involves a return in the UK to targeting full employment rather than consumer price inflation⁶.

Another option would be a shift from targeting consumer prices to targeting nominal GDP growth. This is not a new idea. It would involve central banks, including the Monetary Policy Committee in the UK, being given a target for how fast nominal GDP should grow – probably around 4.5 per cent to allow for 2 per cent inflation and 2.5 per cent real GDP growth. Interest rates would be cut when nominal GDP growth was forecast to be significantly below the target and raised when it was expected to be well above it. The main advantage of such an approach is that it makes the policy response to a supply shock – one that increases inflation and reduces growth (or vice versa) – clearer. For example, in the UK in current circumstances, there would be no question of interest rates being increased to counter higher inflation because weak output means that nominal GDP growth is close to its presumed target rate.

There are, though, disadvantages. Nominal GDP data are released only after a lag and are subject to revision (though to the extent that real GDP data are central to inflation forecasting, this is also a problem for the current approach). More importantly, inflation targeting gives a clear signal to firms and workers about the appropriate level of price and wage increases. Nominal GDP targeting would not do so.

Alternatively, recognising the prominent role of high levels of private sector debt and asset prices in recent fluctuations in the business cycle, a new paradigm might place them at the centre of macroeconomic analysis. It is hard to believe that central banks are right to continue to focus on consumer price inflation and potentially to ignore future bubbles in asset prices. The introduction of a Financial Stability Committee in the UK, to run parallel with the Monetary Policy Committee, is a step in this direction. It is designed to ensure that debt and risk in the financial system as a whole does not reach the dangerous levels seen prior to 2008. However, it amounts to an adjustment in the current policy regime and falls some way short of being a new paradigm that places asset prices at the centre of macroeconomic policy (in Hall’s terminology, a second-order, rather than a third-order change).

The chances of a new macroeconomic paradigm emerging would increase if western economies returned to recession in the near future, or if they appeared to be experiencing a ‘lost decade’ like Japan in the 1990s – an extended period of little to no economic growth⁷. This is not a possibility to be easily dismissed. Detailed economic analysis in recent years has demonstrated that financial crises tend to be followed by long periods

6 In the US the Federal Reserve notionally targets both full employment and inflation, though for much of Alan Greenspan’s reign as Chairman of the Fed the emphasis was on low inflation as a route to full employment.

7 Others have argued that a significant deterioration in the quality of public services could result in a backlash against austerity and a significant shift in tax and spending priorities. However, such a backlash is unlikely to emerge for several years.

of economic pain and turmoil (see for example Reinhart and Rogoff 2009). Richard Koo, Chief Economist at Nomura who has followed closely the travails of the Japanese economy over the last 20 years, believes this is likely to happen in the west. In a letter to *The Economist* he argues 'the economics profession has never considered a recession that could be caused by the private sector minimising debt in order to repair balance sheets after a debt-financed bubble in asset prices. As a result, the profession has no clue as to what is the right thing to do'⁸.

Koo believes monetary policy will not work because there are too few new borrowers and willing lenders, so governments should borrow more of the surplus savings of the private sector. But he thinks that this will not happen in democratic states that are not at war. If Koo is right, then the prospect for western economies in the next few years is grim, and perhaps grim enough to cause the economics profession to recognise that the existing paradigm cannot deal with existing economic problems, so leading to the development of a new one to tackle them.

One possible solution, which draws on an evolutionary approach to economic history developed by Carlota Perez, has been suggested by IPPR Associate Fellow Adam Lent (2009). Lent believes that advanced economies are entering a 'synergy' phase during which productive capital (rather than financial capital) will have the central role in determining growth. But, he argues, the level of investment needed to ensure that strong growth occurs will only be forthcoming if companies are reasonably confident about future levels of demand. This will require that 'demand is consciously encouraged through public policies and business strategies' (ibid. 61). The outcomes of these policies should include a reversal of the trends that have seen real median wages stagnate in recent years and a steady decline in the share of wages in national income over the last three decades.

Attention might also focus on what recent events tell us about the underlying strength of western economies. GDP growth rates during the period from 2000 to 2007 in the US and the UK were not at all exceptional, and yet it turns out that a significant proportion of this growth was generated by financial engineering, debt acquisition and asset bubbles, particularly in housing. This suggests growth would have been very disappointing if all the unsustainable components of that growth had not occurred. As yet though, few are asking why this was the case. Did some combination of the emergence of China, financialisation, reduced investment in productive capacity and the stagnation in median wages hold back growth or was it due to other factors?

Just as in the 1970s, if the neoliberal macroeconomic paradigm is displaced, it is unclear what might replace it. Several alternative groups are offering solutions, though some lack substance. Any could emerge triumphant (Gamble 2009). At one extreme the 'anti-capitalists' would benefit enormously from any second financial collapse or deep recession occurring soon after the last one. Similarly, 'national protectionists' will find increased support for controls on trade, international capital flows and immigration if western economies stagnate in coming years. Whereas, if the economic outcome in the next few years is merely disappointing, rather than downright awful, the more modest changes favoured by the 'regulatory liberals', who favour curbs on the excesses of neoliberalism, particularly through increased regulation of the financial sector, while maintaining free markets and opening trading, might win the day.

8 <http://www.economist.com/node/21526289>

Unless the global economy does deteriorate again in coming years, there appears to be little prospect of an immediate change in the international economic order, though there are significant tensions. The Americans have for many years accused the Chinese authorities of manipulating the Renminbi's exchange rate: holding it down so that Chinese companies are more competitive in world markets. Now the Chinese, who have substantial holdings of US dollar assets, are accusing the US authorities of debasing their currency through the operation of quantitative easing. However, at present, and unlike at Bretton Woods in 1944, there is no shared consensus on the need for change and no obvious substitute for the US dollar as the world's reserve currency. This might change if global economic imbalances get worse over coming years, as Andrew Haldane, Executive Director of the Bank of England for Financial Stability, for one thinks they will (2010).

A shift in the ultimate objective of economic policy

Worries about climate change, population growth and resource depletion have led many economists to conclude that economic growth is unsustainable. Such worries are not new: in the 1970s, the Club of Rome's *Limits to Growth* report explored the apparent incompatibility of exponential growth in economic activity and finite resources and Malthus's *Essay on the Principle of Population*, worrying that the world could not produce enough food to feed an expanding population, was published over 200 years ago. But they have been given new life by fears that climate change could cause serious economic dislocation in the future and also by studies purporting to show that increased incomes in the advanced countries do not lead to greater happiness.

This has led some to argue for measures of progress other than GDP. Ideas include adjusting GDP to take account of goods and services that do not have a monetary value (such as clean air and low crime rates); developing broad-based indices of wellbeing that encompass progress in areas such as health, education, the environment and community vitality, as well as material living standards; and measuring subjective wellbeing (or how happy people are)⁹. In the UK, the Office for National Statistics is currently exploring how it might measure 'national wellbeing' (ONS 2011). Its first set of national wellbeing indicators is due to be published in October 2011 and the final results of its deliberations are expected in 2013. However, this development is more likely to represent a tweaking of the existing paradigm, rather than the installation of a new one.

Some economists are more ambitious, arguing that western economies should target zero growth. In his book, *Prosperity without Growth*, Tim Jackson argues that this would require a new paradigm in economics, which he calls 'ecological macroeconomics' (2009: 176). This new macroeconomics would be based on an economy operating subject to strict limits on emissions and resource use. This would require new understandings and theories of most macroeconomic variables, including consumption, labour demand and supply, investment and productivity. Charles Hall and Kent Klitgaard make a similar case, arguing for a new paradigm based on 'biophysical economics' – a close cousin of ecological economics (2006). They argue that the paradigm shift in economics that occurred in the 1870s introduced abstractions such as subjective utility at the expense of 'measurable physical inputs and outputs of material or energy' (ibid: 7). In anticipation of the changes that will follow after oil production peaks, they want a return to an economics that is focused on the cost of production in terms of the energy and the material resources that go into it.

9 Taking the idea of well-being perhaps to its limits, the case has been made for a paradigm centred on 'Buddhist Economics' – targeting peace and tranquillity rather than prosperity, pleasure and gratification – as the new paradigm (Puntasen 2007). Western societies are some way from such a shift.

There are, however, a number of obstacles likely to prevent these approaches forming the basis of a new paradigm in the next few years. First, among the general public there tends to be a lack of widespread acceptance that carbon emissions and resource depletion are imminent problems¹⁰. This may represent myopia on a massive scale, but so long as a majority of policy elites display disinterest (or at least do not rank these issues as immediate priorities) climate change and resource depletion will struggle to become the bedrock of a new paradigm. Second, many who accept that rising emissions and resource depletion are problems do not agree that zero growth is the solution, arguing instead that they can be resolved through technological progress if resources are deployed appropriately. Third, the theory of ecological economics is not well-developed enough to supplant conventional economic thinking (compared, for example, to where monetarist economics was in the 1970s). And fourth, ecological economics has little to say about the financial crisis and global recession of 2008/09. Any new paradigm is, in our view, likely to have to address this major anomaly in the neoliberal model.

A shift in the nature of economic thinking

Mohammed Dore and Barkley Rosser argue that the stage is set for a paradigm shift in the nature of economic thinking: ‘Kuhnian anomalies abound and ... there *ought* to be a paradigm shift but ... there appear to be ideological reasons why neoclassical economics continues to thrive’ (2007: 2, emphasis in the original). Their view is that the Walrasian general equilibrium model that underpins neoclassical theory is well past its sell-by date because it is linear and static, whereas economies are nonlinear and dynamic and that ‘complexity economics should form the basis of the new paradigm’. To borrow Lakatos’ terms, traditional economics can thus be seen as a degenerating research programme and complexity economics as a progressive research programme. Magda Fontana takes a similar view, saying that ‘complexity theory is a scientific paradigm whose characteristics imply a methodological revolution’ (2008: 4).

Complexity economics challenges the assumptions of the traditional neoclassical model of the economy that underpin Keynesian and neoliberal thinking (Beinhocker 2007). It sees the economy as a ‘complex adaptive system’ and allows for a wider set of interactions between heterogeneous individuals. Complex adaptive systems are dynamic networks of interactions and relationships that have been shown to occur in biology, business and stock markets. Within all of these systems, individual components react to each other’s behaviour as well as to the surrounding environment.

Complexity economics seeks to understand how interactions at the micro level lead to particular macroeconomic outcomes. Change and adaptation at the individual level are viewed as the cause of emergent patterns that can only be seen at the macro level. A system is said to be dynamically complex if it is driven by a deterministic endogenous process that does not lead it asymptotically to a fixed point, a limit cycle or an explosion (Day 1994). In other words, if the economy displays periods of intermittent periods of calm and chaos, then it is probably a complex adaptive system. Most non-economists would recognise this as a reasonable description of the real world and accept that ‘without an adequate understanding of [the inherent dynamics and instability of economic systems], one is likely to miss the major factors that influence the economic sphere of our societies’ (Colander et al 2008: 3). They would be surprised, therefore, to discover that the vast

¹⁰ The result of this is the so-called ‘Giddens Paradox’, a term coined by Anthony Giddens himself, which posits that because the dangers posed by climate change are not immediately evident in people’s everyday lives, they will do little about it until it is too late. (Giddens 2009)

majority of economists continue to cling to the orthodox, or traditional neoclassical, economic view of the world, which simply fails to provide for such an understanding.

Nevertheless, many proponents of heterodox economics (which encompasses strands such as evolutionary and institutional economics, as well as complexity economics) are pessimistic about the chances of a major shift in thinking within academic economics, unless it is externally driven. There are several barriers preventing change (Hodgson 2009, Earl 2010). Many academic economists are ignorant of new ways of economic thinking and continue to teach economics as it was taught to them. Senior professors remain interested primarily in elegant mathematical models rather than developing an understanding of developments in the real world and are able to secure the support of colleagues in preventing changes to the curriculum. The top academic journals will only accept papers that are built around a mathematical model and 'mainstream economists seem to have stopped citing anyone, except the most recent pioneers of mathematical technique' (Hodgson 2009: 1208). As a result, advancement within the academic profession, which relies on peer reviewed publications and citations, is secured by those favouring an orthodox approach.

This is not a new problem. Peter Earl notes: 'Suggestions that mainstream economics has been a failure and that the discipline is in a state of crisis have been repeatedly made over the past 40 years' (2010: 222). Geoffrey Hodgson notes how a Commission set up by the American Economic Association in 1988 concluded that university teaching left new graduates largely ignorant of real economic issues and highlights similar comments from several noted economists over the last 30 years (2009: 1210). The 1970s crisis might, therefore, have produced a major shift in economic thinking on the surface, but deep down it failed to do so because the profession refused to change from within and there were insufficient pressures from without for it to do so. What is more, he argues, orthodox economics is better placed now to resist change than it was in the 1970s, so a paradigm shift within the academic profession is extremely unlikely.

In 2007 Dore and Rosser argued that a complexity economics revolution was being held back simply by an ideological commitment to general equilibrium because it was needed to justify the neoliberal model. From the perspective of 2011, the same conclusion is harder to draw. If support for the neoliberal model was all that was preventing a paradigm change, then the financial crisis and recession would surely have been enough to tip the balance. In fact, they inadvertently provide an alternative explanation for the failure of a new complexity economics paradigm to have developed when they note 'complexity ... in modern economics poses difficult problems for policymakers' (Dore and Rosser: 16).

Complexity implies policymakers cannot be sure of the effects of their actions and complexity economists have not been able to articulate adequately the implications of their discipline for policymakers. Fontana, also apparently inadvertently, highlights a related problem: 'Given that complex systems are ontologically unpredictable ... a science dealing with them cannot take prediction as its aim' (2008: 18). But so much of modern day economics is about prediction, whether it is the Office for Budget Responsibility projecting economic developments to underpin fiscal policy, the Bank of England forecasting inflation in order to set interest rates, or City economists making their predictions about the future level of interest rates, exchange rates, bond yields and stock markets. Although some complexity economists have endorsed the use of techniques that try to make sense of the inherent unpredictability of the future – for example, computerised simulations and

randomised control trials – this historical reliance on forecasting is a formidable barrier for a new paradigm that inherently rejects the predictability of the economy.

Economics is about both understanding developments in the economy and attempting to generate better outcomes (even if, as the classical model suggests, that means largely leaving private agents to get on with economic activity uninterrupted). Complexity economics may be improving our understanding of how economies work but it is unlikely to become the new paradigm until it has a lot more to say about how policymakers should act: in this respect Kuhn's observation that a paradigm 'provides... not only a map, but directions essential for map-making' seems especially pertinent (Kuhn 1962: 109). The onus, therefore, is on proponents of new ways of thinking about the economy to find ways to get their message to a wider audience: 'heterodox economists as a group should spend less time writing about method and more practising what they preach by developing empirically-grounded theory, doing applied pluralist research, and contributing to public inquiries' (Earl 2010: 223). Some are beginning this process – for example, through George Soros's Institute for New Economic Thinking (INET) and the newly-established Synthesis thinktank ¹¹, as well as under the auspices of IPPR's own New Era Economics programme. More need to do so.

11 See www.synthesisips.net

CONCLUDING THOUGHTS

Paradigm change of the type described by Kuhn or third-order change of the type described by Hall is rare in economics. In the 1940s, there was a Keynesian revolution in macroeconomics at the same time as a shift in microeconomics from partial to general equilibrium analysis. In the 1970s, Keynesianism was replaced by monetarism, the rational expectations hypothesis became central to economic theory and both combined with ideological change in the 1980s to produce what we now know as neoliberalism. Meanwhile, microeconomics was changing as a result of developments in game theory, experimental and behavioural economics.

Even a cursory examination of these changes – particularly those in macroeconomics – reveals important differences in the way that change was brought about. In the 1930s and 1940s change was slow and ultimately led by the political elite in the wake of the experience of the second world war. In the 1970s, change came more quickly and was driven by outsiders. Two factors, though, were common: a clear perception of anomalies that the old paradigm could not explain, and the existence of sufficient new theories and policy prescriptions to coalesce into a new paradigm.

This may help us understand why there has not been a paradigm change in macroeconomics since the financial crisis and recession. First, the anomalies may not have been big enough. Although advanced economies experienced their worst recession since the 1930s, levels of unemployment are far below those seen in the Great Depression and, until recently, the living standards of those who kept their jobs had not fallen much. Second, there is no clear alternative. The most vocal critics of the existing paradigm have been the neo-Keynesians, whose prescriptions appear to come from the past, rather than represent the future. This does not mean change will not eventually occur, but if it does it will require more time for an alternative to emerge.

More intriguing is the possibility of a shift in the way that economic thinking is done. There is an urgent need to depose what John Cassidy has called ‘utopian economics’ and to replace it with ‘reality-based economics’ (2009). Unfortunately, utopian economics is relatively easy to explain and understand, which makes it attractive to policymakers and the media, and it is firmly entrenched in academia. The very dynamics of the economics profession, which serve to entrench the status quo, make change extraordinarily difficult. Moreover, the fact that reality-based economics is much harder to model and explain, represents an additional barrier.

Consequently, one might be inclined to presume that change will only come if it is driven from outside the profession by demands for economics to provide solutions to problems in the real world, rather than models of hypothetical worlds that bear little relation to reality. Such demands have, however, not been evident in the last few years and for the time being at least, continue to elude us.

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